

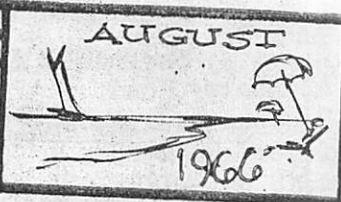
PHILMONT *Mobile* RADIO CLUB INC.

The



BLURB

7 AREA.
MEMBER



THE GREAT CANOE
Race
AUG. 13 & 14 - ALL
PHILMONTER'S INVITED
TO PARTICIPATE!

The BLURB is published monthly by and for the members of the Phil-Mont Mobile Radio Club. Our purpose is to further the interest of amateur radio in general and mobile radio in particular. We endeavor to keep the news accurate, interesting, and educational. Copying and quoting is permitted, with a credit line, and we gladly exchange subscriptions with other clubs.

DEADLINE: All material must be in the hands of the Department Editor before the 15th, as the BLURB is mailed on the last Monday of each month.

EDITOR

Lloyd W. Sherman - W3CDY
42 Ashley Road
Newtown Square, Pa. 19073
Tele: EL 6-4787
ARNS 48 - AREA 176

ASSISTANT EDITORS

John J. Tinaglia - W3AWH
200 Glen Road
Ardmore, Pa. 19003
Tele: MI 2-9064

Samuel Moskowitz - K3RTR
401 Sansom Street
Upper Darby, Pa. 19082
Tele: FL 2-0798

PINCH HIT EDITOR - K3HIE

1966 CLUB OFFICERS**President:**

Fredwood S. Shaw - W3ADV
3420 Tyson Road
Newtown Square, Pa. 19073
Tele: 353-2637

Secretary:

Robert E. Mynster - K3UWO
328 Richardson Road
Lansdale, Pa. 19446
Tele: 822-3801

Vice President:

Robert G. Thomas - W3QZO

Treasurer:

Charles E. Greenwood - W3GOW

Directors: Al. F. Bubeck, K3GNM (E66); Al. E. Jorett, W3OWK (E67); George B. Weed, W3MHR (E68); Joe E. Elmaleh, K3HIJ (A); Wm. F. Bubeck, W3YHV (A)

DEPARTMENT EDITORS & HEADS

Tech-ni-gram W3QZO & Comm.
Swap/Shop K3QQH
Chan. Chat. W3CHZ & W3QV

Features W3MHR, W3PXY, W3JYA
Art WA3CNI
Publisher W3LEM

Printer W3YHV
Stitchers K3HIE & W3GIF
Collator W3QQH
Addresser W3VVS

W3TKQ - CLUB STATION

The Franklin Institute
Fredwood S. Shaw - Trustee
20th & Benjamin Franklin Parkway
Philadelphia, Pennsylvania 19103

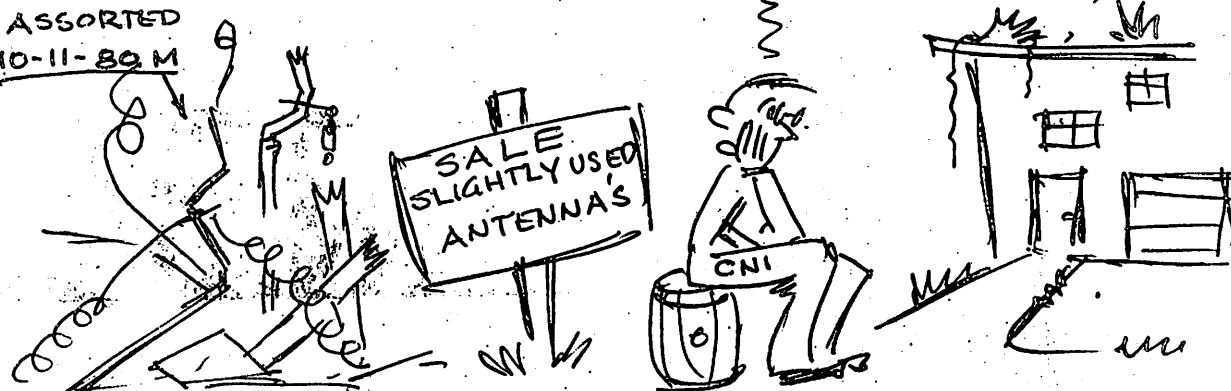
CLUB NETS & FREQUENCIES

29.493mc - 10-on-10 Net Sundays
1000, monitored daily. 29.626mc
2nd Freq., 3993kc SSB 0730-0845,
50.70 and 52.525mc (FM) 147.78mc

Sam's HALF ACRE

OLD DAME NATURE
HATH NO MERCY!

ASSORTED
10-11-80 M



THE PREZ SEZ

Here we are past the half-way mark in 1966 and I find that my time in office has gone by very quickly. I have not yet been able to get all of the things done that I expected to get done-- but there is still some time left. There is no doubt that I have received some fine support from the officers and committees and I am extremely grateful. We have had many interesting meetings and expect to have more before the year's end. The regular meetings have been well attended but the disappointing thing to me is that I've missed seeing many familiar faces since taking office. My idea of good club support would be to have about three-quarters of our membership taking part in our activities instead of about one-half. So I am making a personal plea to all of you good Phil-Monters who have not been coming out this year, to please get in the swim and turn out during the rest of the year. Our Program Committee is looking for any suggestions for our Fall meetings, -- any ideas?

One of the important jobs yet to be done this year is to get W3TKQ on 6 and 2 meters. We have the matching cabinet to house the equipment plus 6 and 2 meter 100 watt transmitters to go into it. I need a volunteer or volunteers to get this work underway. This should be a very interesting job for someone to put together. Please talk to me about this if you are interested. The target date to go into service is December 1, 1966.

Fred, W3ADV

**** ** *

IT SEEMS TO ME

that now is the time for all good men ----oops, now is the time to stump for some major revision or another in the club since this is the chief benefit of being the editor (guest or otherwise). However, there is only one little item I feel strongly enough about, to climb on the soapbox for:

What ever happened to all the nice thoughts about getting an assistant for the Phil-Mont chow server?

This is a job that carries with it no cheery words of "Well Done", only grumbles when some little thing holds up the coffee (like having to wait until the slides are over to use the electricity.) But, knowing what a chore it is, and that other clubs have worse problems in getting someone to do it at all, a public word of appreciation to AL HAMILTON, W3Gee I Forgot, is hereby extended, along with a plea to one of the newer members who has never helped with chow -- please

V O L U N T E E R to give Al a hand during the year.

de K3HIE

**** ** *

PHIL-MONT CALENDAR FOR AUGUST

Monday, August 1 Regular meeting at the Franklin Institute.
Wednesday, August 17 Mid-month at W3WXC. See map on another page
for directions to Dick's QTH.
Monday, August 29 Blurb folding at W3QQH.

**** ** *

CLUB NEWS AND ACTIVITIES

The regular meeting on July 11, held at the Franklin Institute, was well attended in spite of the blistering heat.

Upon completion of the routine business of the meeting, President Fred Shaw W3ADV introduced the guest speaker, Eric Carlson W3MOO, with the admonition to tell us all he knew about transmission lines in an hour. He couldn't and didn't! But what he did do was pass on some real information which most of us can profit by. Most choice advice: FORGET THE SWR BRIDGE. IF THE RIG LOADS AND GETS OUT, ENJOY IT!!!

After the question period which saw many weird looking supposed automobiles sketched on the blackboard by member artists, refreshments were served by our Chow Committee-- Al W3GIF with an assist by Murray K3SP8.

Twenty-eight members were present to receive the initial distribution of the new Phil-Mont directory hot from the hands of Sam K3RTR. One of our visitors, having been a member before, and making application to re-join, is once again a member. He is:

K2EGF (ex W3KHR)

M.E. Dahl
Richards Ave.
Atco, N.J.

BUD

Welcome back, Bud!

Two of the visitors have made application for membership. They are:

WA3ABU

Winfield G. Salmonson
117 Wooded Lane
Villanova, Pa.
Wife's name-- ELVA
Sponsored by: W3OM, W3OWK

WIN

WB2WJE

Robert E. Kercher
32 Heritage Rd.
Marlton, N.J.
Wife's name--DOROTHY
Sponsored by: W3CDY, W3NIP

BOB

In addition, we were favored with a return visit by Charlie Jenkins W2VX, bringing with him a personal invitation for all Phil-Mont members to share the festivities of the 50th Anniversary Banquet of the South Jersey Radio Association. Besides these guests, Ernie W3D\$G introduced WA3DMR, WA3DSP, W8VZ, and WN3CNQ.

**** ** *

COMING EVENTS

The following list of events which will take place in the near future should be of interest to both Phil-Monters and other amateurs in this area. The information is as nearly correct as possible.

Saturday, August 13
Sunday, August 14

"Paddlerama". Boy Scouts canoeing down the Delaware River to Easton on Saturday; from there to Treasure Island on Sunday. Mobile communications furnished by Phil-Mont under direction of Jim W3QQH.

Sunday, August 21

Model airplane meet at Johnsville NADC. Phil-Mont mobiles to provide plane retrieval service under direction of Jim W3QQH. There can never be too many mobiles for an event of this nature, unless they don't fly the planes for one reason or another.

Sunday, August 21

Reading Clambake. Information will be published when available.

Saturday, September 10

South Jersey Radio Assn. Banquet instead of Annual Hamfest, to celebrate fifty years of continuous activity. Fabulous prizes! IvyStone Inn, Route 130, Pennsauken, N.J. Ticket reservations may be made until August 20. Send \$7.50 per person to P.O. Box 316, Haddonfield, N.J.

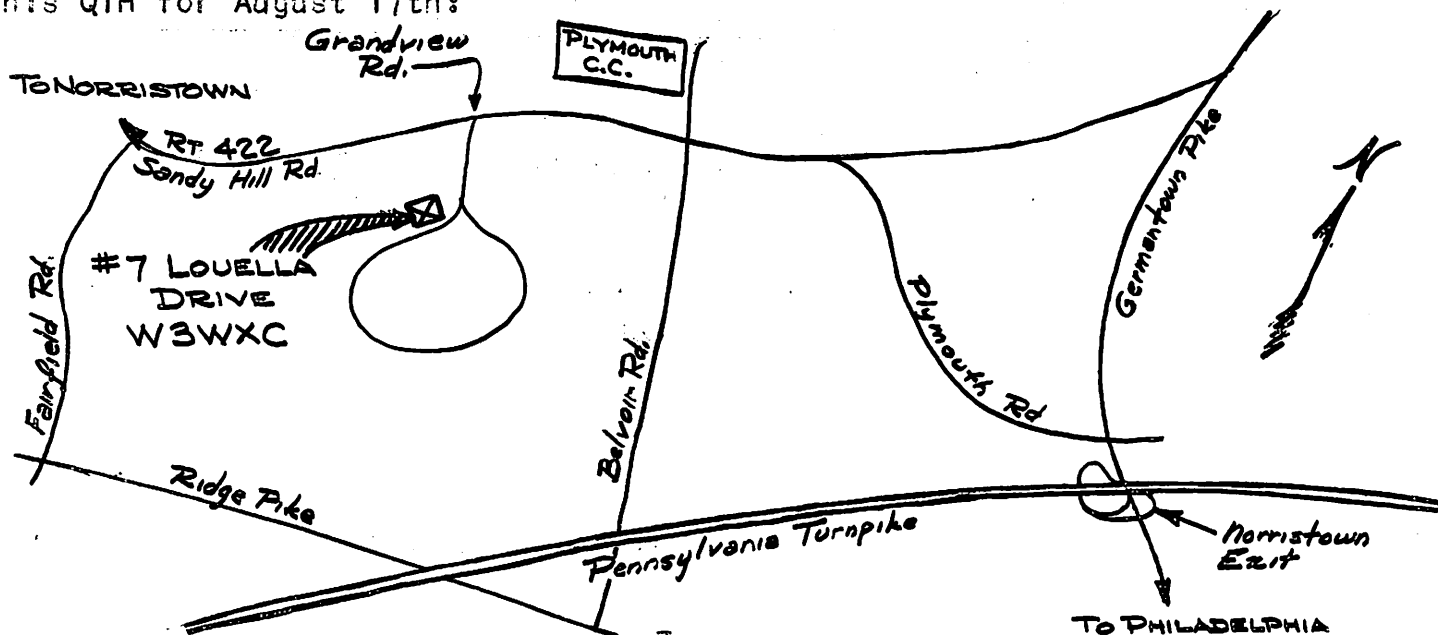
Saturday, November 12

PHIL-MONT MOBILE RADIO CLUB ANNUAL BANQUET AT THE BARCLAY. DETAILS LATER.

**** * * *

DIRECTIONS TO AUGUST MID-MONTH

Thanks to Dick Klein W3WXC, this map is presented as a guide to his QTH for August 17th:



CHANNEL CHATTER

FLASH!!! NELSON W3DYP HAS BEEN RELEASED FROM WILLS EYE HOSPITAL AND ANNOUNCED HIS PRESENCE WITH A QSO WITH W3QV. GLAD TO HEAR YOU'RE BACK NELS, AND WE ALL WISH YOU A SPEEDY RECOVERY.

Karl W3BS is not really going in for "mobile beams" as previously reported, but he and his "chief engineer" Jim Logan W3GVZ have been experimenting with 6 meter horizontally and vertically polarized mobile antennas. To substantiate this, he enclosed a color photo of W3BS/m complete with abbreviated horizontal dipole and W3GVZ, unabbreviated.Has this question often puzzled you? "Who teaches the teacher?" Tune in to channel 1 most any day between the hours of 0630 and 0130 for one answer..... Walt K3OJA/m receiving notification from Al W3JIL that he was not likely to find much service at the airport during the strike. (Lots of activity though.).....Bob K3CEE sporting a newly airconditioned shack. Forgot to close the cold air return and cooled off the basement rather than the shack, the first time he fired it up..... Speaking of airconditioning, Jim W3QQH (has/has not) gotten his ten meter mobile installation straightened out (already/yet). Just choose the proper set of words to suit the conditions of the moment. It's impossible to keep up with the state of W3QQH/m..... PHIL-MONT'S UNITE! Send your material early and often to the guest editors for the coming issues of the Blurb, as follows:

John Tinaglia W3AWH September
Bob Thomas W3QZO October

Close August 15
Close September 15

It sounds like old times on Channel 1 with K3CEE's signal penetrating the squelch as he checks out a new antenna with Jack W3DJW and Bill W3FTZ. Thought at first that Bob was keeping quiet so we wouldn't hear how much more literate he is now. Or wasn't it superior education that got all those fire hoses stuffed down the trash chute at the same time to flood the basement?.....One of Phil-Mont's recent guest speakers, Ed W3RCE has a new phonetic for the letter "H", which he tried out with sterling success at field day with another club. Ask him about it, Fredwood!.....Harold W3ZN received two certificates of merit for copying Armed Forces Day messages without error at 25 wpm CW and 60 wpm RTTY.....On a clear day, you can hear forever: "Good, good morning, Al" and another day starts with W3OWK at W3RQZ.....Seems as though a county EC learned something about emergency communications versus the scheduled drills, one Sunday morning when he ran across some horses (of the four-footed variety) on Butler Pike and put in a call on Channel 1. Another Phil-Mont service!.....Pell, son of Lloyd W3CDY, graduated from Navy Electronics School in Chicago and transferred to Bethesda, Md. Congratulations!.....Sam K3RTR, Rolland W3PWG, and Frank K3RSX did their Field Day chores with the ARTICS Radio Club in the heat. With a name like that, and no airconditioned trailer? Shame!.....Jim W3QQH wants to know if Al W3GHE has shown anyone the golf stroke he uses to make his final smoke?

**** ** *

Many thanks to Bill W3YHV, Sam WA3CNI, and Sam K3RTR for their assistance with this issue of the Blurb.

**** ** *

SWAP AND SHOP

For Sale: Minneapolis-Honeywell transistorized
mobile power supply. Model W612A.
New condition. \$25.00

Johnson Matchbox, 250 watt, with
instruction manual. Excellent cond. \$25.00

Al Bubeck K3GNM

For Sale: Saturn 6 -- Halo antenna, M.T.I.
matching transformer for 52 ohm line.
Lafayette HE-45A transceiver, 6m,
late model, factory modulation changes.
This equipment like new; used twice.
AC-DC cables and mounting bracket.
All for: \$60.00

W3DHH, 4006 N. 12th St., Phila.
DA 4 1394

Need at Once: One Sylvania 25AP22A color CRT
in orig. carton. Sacrifice swap - RCA
CSF 55 A 2 R FM base station. One dozen
spare 6146B's plus one free FB B&W dipper.

W3ZWR, 1657 Haworth St., N. Phila.
Tel: 744 0583

For Sale: 1 unopened 4-400A. Reasonable.

W3BV CL 9 4385

For Sale: Alliance Model 400 garage door opener
with electronics package, Model AC-15.
(One trans.; one rec.) New, in unopened
cartons. \$110.00

Charles Gilbert W3YJM
MI 6 5399

**** ** *

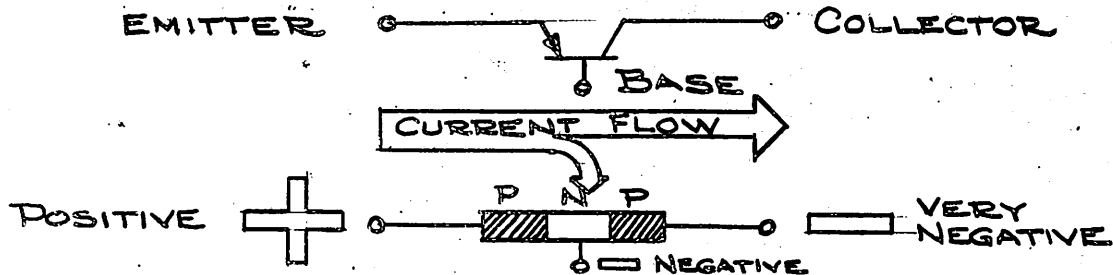
PHIL-MONT TEKNIGRAM

Transistors for Hams by Bob Thomas, W3QZO - Part II

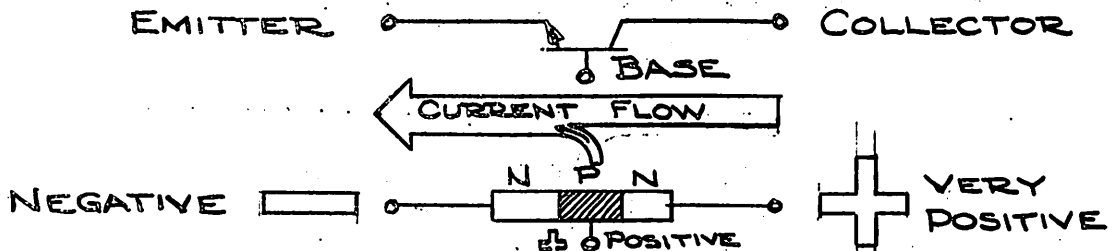
Last month two secrets of the universe were revealed by your faithful scribe:

1. In semiconductor symbols, current flow is only in the direction of the arrow.
2. D.C. current gain (also called beta β and h_{fe}) is equal to collector current divided by base current. Beta is a figure of merit for a transistor in most ham applications.

Recall the following diagram for a PNP transistor from last month:



The same kind of diagram for an NPN device would look as follows:



Notice that when you compare a PNP transistor to an NPN, the arrow depicting current flow is reversed, the actual direction of current flow is reversed, and all bias voltage polarities are reversed. Also, as Franklin mistakenly predicted, current flow is from plus to minus in either type. In fact, you can substitute a PNP transistor for an NPN of similar type, or vice-versa, by doing the following:

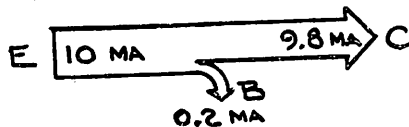
1. Make sure you're substituting a similar (except for polarity) transistor; i.e. don't try to replace an NPN RF amplifier with a PNP audio type -- use a PNP RF type.
2. Reverse all power supply polarities.
3. Reverse all electrolytic capacitors.
4. Reverse all diodes.

In either type transistor the emitter-to-base junction is biased to permit heavy current so that this junction normally appears to have a low resistance. On the other hand, the collector-to-base junction is biased to restrict current flow, thereby producing the effect of a high resistance. You won't be a big shot in the electronics game until you learn to call the base "forward biased" and the collector "reverse biased".

Now take another look at the diagrams above. Notice that most of the emitter current finds its way to the collector although some of it sneaks out the base. That's what you might call the transistor wagging

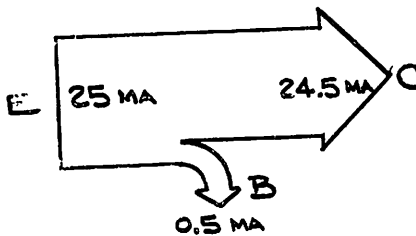
PHIL-MONT TEKNIGRAM
(continued)

its tail, because the base current is always collector current divided by β . (β is a fixed value for any particular transistor and is equal to collector current divided by base current. We may therefore say base current = collector current divided by the current gain, β). We can benefit from this phenomenon of current gain by using the tail (base) to wag the transistor (collector current). In other words -- and this is the heart of the story -- as long as the base current is a small, fixed percentage of the much larger collector current, we can control the collector current, and consequently a lot of power, by wagging (or in technical parlance, varying) the low current, low power base bias. Take a look at the diagrams below. They show how the collector current can be made to vary as a function of base current.



NORMAL AMPLIFIER

$$\beta = \frac{9.8}{0.2} = 49$$



NORMAL AMPLIFIER
INCREASED CURRENT
OUTPUT

$$\beta = \frac{24.5}{0.5} = 49$$



NORMAL AMPLIFIER
NEAR CUTOFF

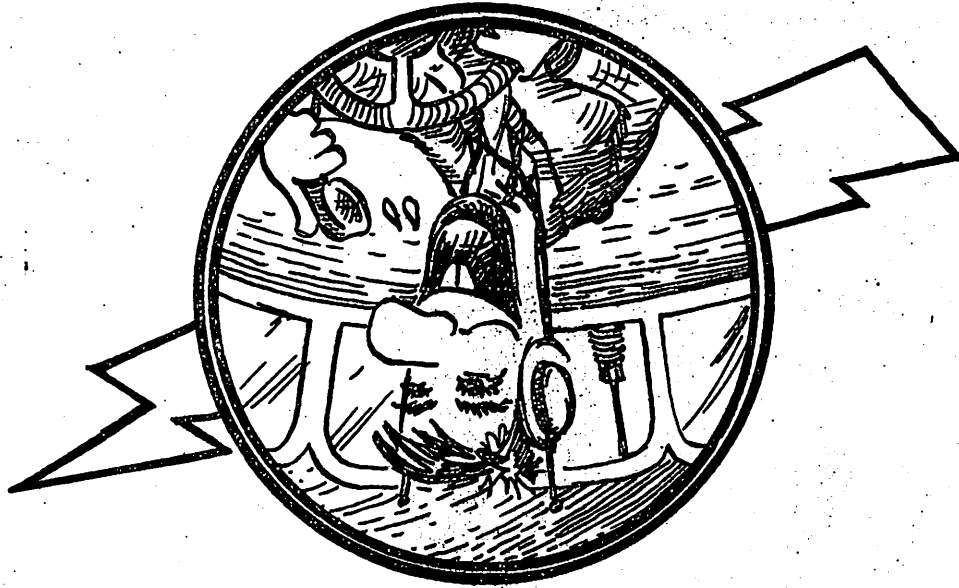
$$\beta = \frac{0.98}{0.02} = 49$$

In comparing the example in the center with the one at right, notice that the collector current was changed from 24.5 ma to 0.98 ma (23.52 ma variation) with a change in base current of only 0.48 ma! And strangely enough, the collector current variation is exactly 49 times the base current variation, and 49 is the β of the transistor!!

NEXT MONTH - FIRST STEPS IN CIRCUIT DESIGN.

BCNU -
W3QZO

PHIL-MONT MOBILE RADIO CLUB INC.



The "Blurb"

**A PHIL-MONT MOBILE RADIO
CLUB PUBLICATION**

10 No. YORK RD. WILLOW GROVE PA.